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Fewer Farm Workers

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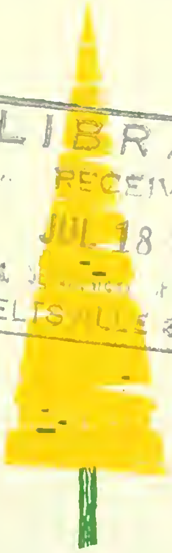
No. 721

PEOPLE and TIMBER



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. . . A REVIEW OF AMERICA'S TIMBER RESOURCES

S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE

Miscellaneous Publication No. 721

This booklet tells the story of our timber situation today— and takes a look into the future. Here are findings o the Timber Resource Review, a 3-year study made by th Forest Service, U. S. Department of Agriculture, with th collaboration of State foresters, other State agencies, forest industries, and other private and public organizations

America is growing . . .

more goods and services . . .

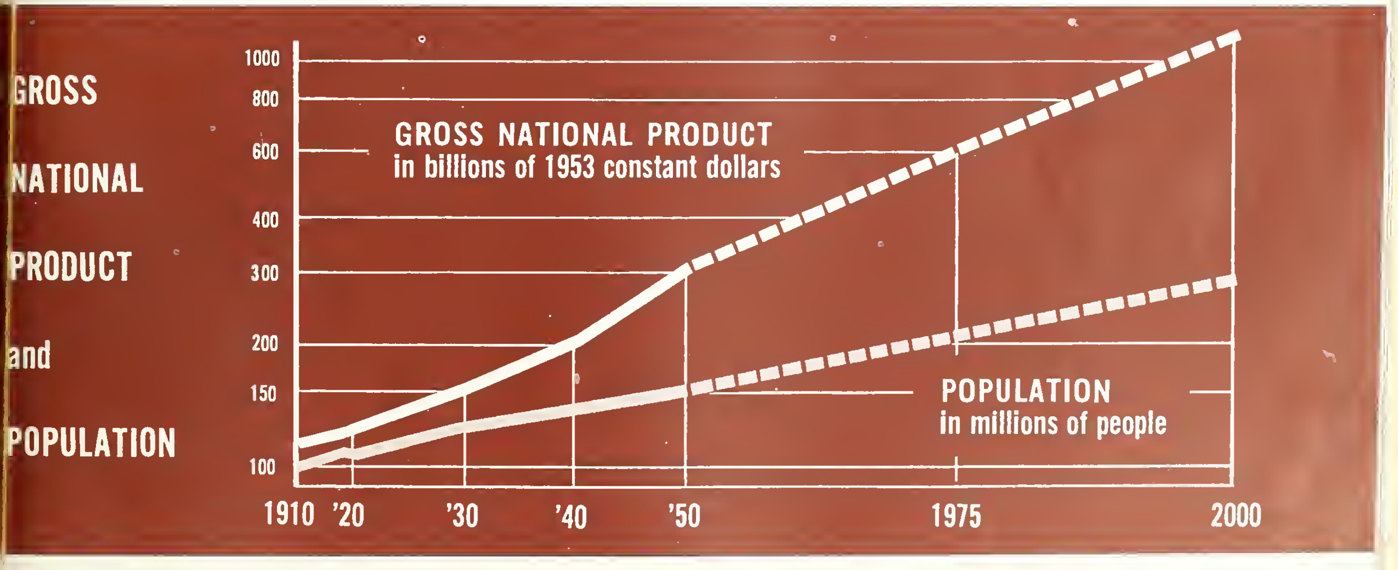
We are living in an era of tremendous growth. Signs of this are verywhere—new housing, new mills and factories, new highways and ransportation facilities, cities expanding into their suburbs. The heme of our times is expansion.

We are producing far more than our parents ever did. Our national output of goods and services—the gross national product—was, in 1952, 354 billion dollars; in 1900—figured at the present-day value of the dollar—it was about 100 billion dollars. In 50 years, we have more than tripled the amount of goods and services all of us produce.

more people . . .

One of the principal reasons for the great expansion is the sharp increase in our population. Our death rate has declined, our birth rate has zoomed. Ten years ago we had 140 million citizens; today we have over 160 million. Our population has doubled since 1900.

Our Nation may have about 210 million people in 1975. And in the year 2000—about 275 million.

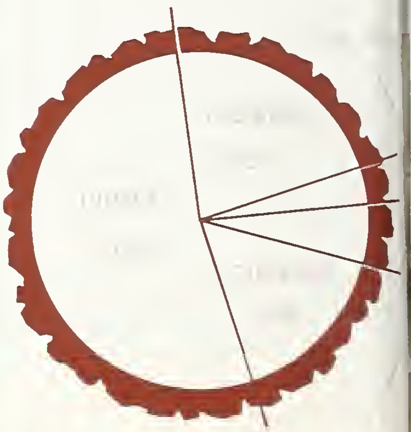


How is America going to supply her rapidly swelling population with enough raw materials? Obviously, we have to plan ahead to provide for those who come after us, so that they will enjoy the same abundance we have today.

timber helps America grow . . .

Our inherited abundance of timber is a major factor in the growth of our dynamic economy. Timber products account for about one-fourth of all the raw materials we use in manufacturing and building. More than 12 billion cubic feet of timber products are consumed yearly: Saw logs for lumber, pulpwood for paper, fuelwood, posts, poles, piling, and other logs and bolts from which products such as veneer and cooperage are made.

The average American uses about 80 cubic feet of wood per year. Lumber is used in greater amounts than any other industrial timber product. Each one of us uses twice as much lumber as a Russian, four times as much as an Englishman, and six times as much as a Frenchman. Our use of paper, too, far exceeds that of any other country.

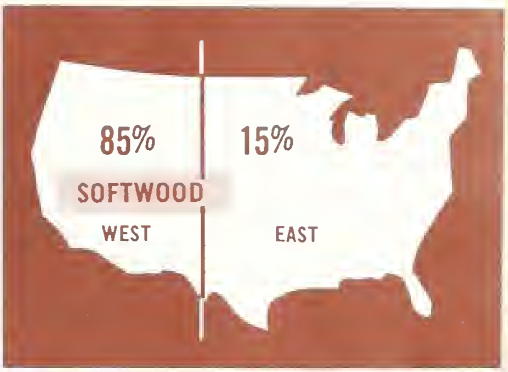


In recent years consumption of some products like pulpwood and veneer logs has skyrocketed. Meanwhile, our use of certain other products has increased less rapidly and the use of fuelwood has markedly decreased. Except for fuelwood, however, overall consumption of wood in this country is at an alltime high.

the timber we have . . .

Pines, firs, and other softwoods are the main strength of America's timber resource, comprising four-fifths of the larger trees (sawtimber) now standing on our timberlands. Oaks, maples, and other hardwoods represent the rest of our timber supply.

The five leading species are Douglas-fir, ponderosa pine, the true firs, the southern yellow pines, and the oaks. Douglas-fir and southern yellow pine together make up one-third of the sawtimber growing in our forests.



The timber resource today (slightly more than 500 billion cubic feet, including about 2,000 billion board-feet of sawtimber) represents a tremendously valuable national asset.

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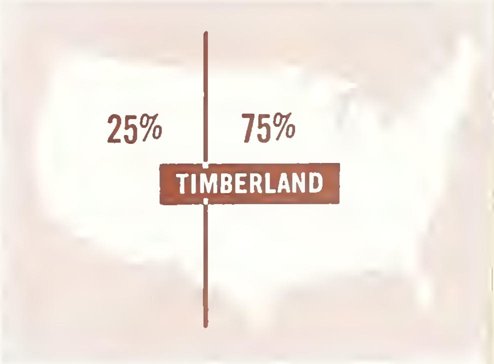
where the timber is . . .

More than two-thirds of our sawtimber is in the West and in coastal Alaska. Here nearly all of our remaining virgin forests—occasionally yielding up to 100 thousand board-feet per acre—are located.

In the East—where three-fourths of our timberland is found—there are only small scattered remnants of the virgin forests. The old-growth timber was largely used up as our Nation expanded westward. Although new growth has come in, few eastern stands today have as much as 5,000 board-feet per acre.

There are about 3 acres of timber-growing land for every person in the United States—489 million acres in all.



America's timberlands . . .

Here, over the surface of America, reaching far and wide from one coast across many areas of the interior to the opposite coast, are America's timberlands.

Today these forests account for one-fourth of all the land area within the United States. In New England, the South Atlantic States, the Southeastern States, and the West Gulf States, more than half of the land area is forest.

who owns the timberlands . . .

Here is the way America's 489-million-acre forest tract breaks down according to ownership:

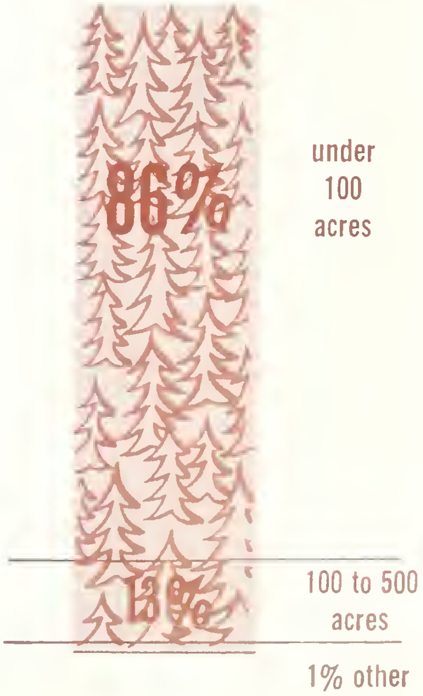
34%	**FARM OWNERS . . .** both farmers and ranchers	296 million acres (60%)	Thus 359 million acres are privately owned 73%
26%	**NONFARM OWNERS . . .** from all walks of life		
13%	**FOREST INDUSTRIES . . .** chiefly lumber and pulp	63 million acres (13%)	
27%	**PUBLIC OWNERSHIP . . .**	130 million acres (27%)	The largest acreage of public timber is in the National Forests . . . 17% of the total

small forests predominate . . .

Most of our Nation's timberlands is in the hands of farmers, businessmen, professional people, housewives, retired folk, and other private owners not associated with any forest industry. There are 4,500,000 such private ownerships (three-fourths of them farm forests); forest industry ownerships number 23,000.

Small forests of less than 100 acres each, most of them farm and nonfarm woodlands, make up 86 percent of the total number of private ownerships. Owners of woodlands ranging in size from 100 to 500 acres account for another 13 percent. The remaining 1 percent of the total private ownerships is represented by larger forest properties held mainly by forest industries and other land-owning companies.

To sum up, the most important class of timberland owner is the American farmer and his fellow citizen. In fact, about 1 out of every 10 American families owns a small forest.



the timber situation today . . .

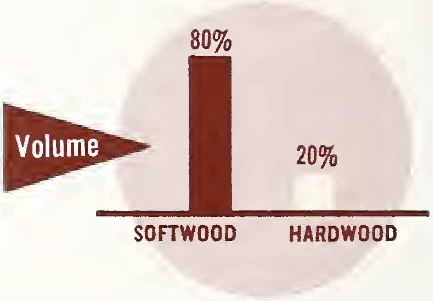
Many forest owners today recognize that timber is a crop. The Nation can point with real pride to the way many holdings, such as the large industrial forests and the public forests, are managed.

Forestry progress is one important feature that shows up as we examine the condition of our timberlands. There are other features and we have to consider them all. The timber situation is not a simple matter; it is rather complex.

With this in mind, let's look at some of the major features and see what they mean.

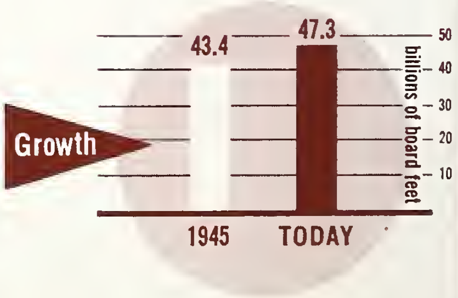
volume mostly softwoods . . .

80 percent of the sawtimber in our forests is pine, fir, and other softwood trees. *Significance:* It is fortunate that we have a large proportion of softwood trees in our stands because these are the trees for which we have the greatest need. Since the last survey in 1945, there appears to have been no major change in softwood volumes.



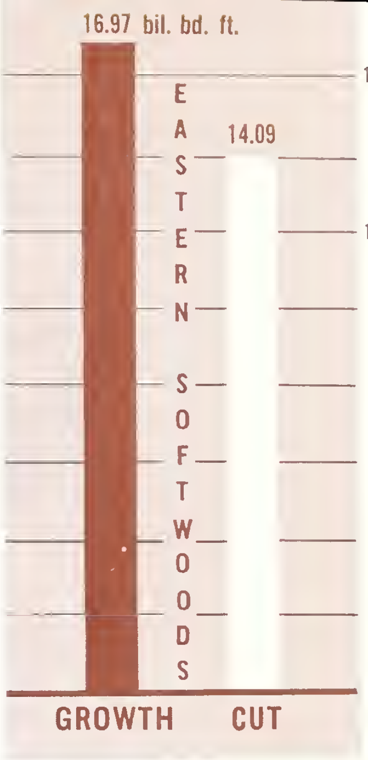
growth is increasing . . .

One of the most favorable features in our timber situation is that growth is increasing. *Significance:* Despite a decrease in the West, there has been an increase of sawtimber growth nationwide. In the East, growth of both softwoods and hardwoods is up, with the heaviest increase in the South. Western growth should increase as more old, slow-growing timber is cut *provided* it is replaced by younger, faster growing trees.



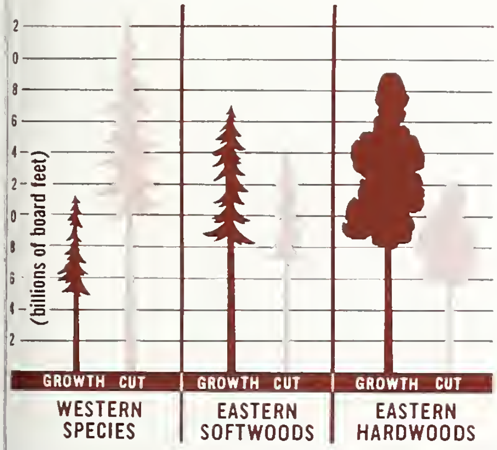
softwood growth in east exceeds cut . . .

The East is growing one-fifth more softwood sawtimber than it cuts and three-fifths more hardwood. Most eastern species now have a favorable growth-cut relationship. *Significance:* Even though tree growth is far below the capacity of the land, this favorable growth-cut picture (especially in softwoods) indicates the possibility of building up the timber resource in the East.



however . . .

SAWTIMBER GROWTH and CUT



In considering growth versus cut, there is a tendency to make overall comparisons. Such comparisons are often meaningless and can be quite misleading. For example, our Nation is now growing just about as much sawtimber (47.4 billion board-feet) as it is cutting (48.8 billion board-feet). However, we are cutting more softwoods than we are growing and it is hardwood growth (in excess of hardwood cut) that makes up the difference. Even an overall comparison of just the softwood growth and cut is not very logical. There are inherent differences between the East and the West—unlike the East, the West still has virgin forests which are adding little growth and yet are being heavily cut.

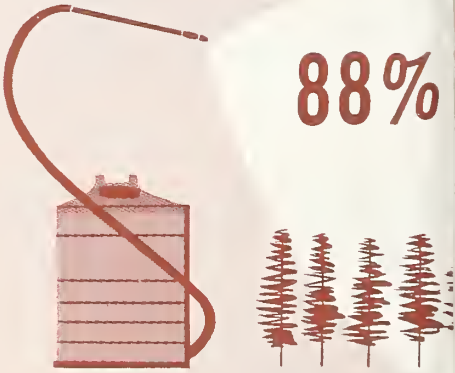
In thinking about growth and cut the most important consideration should be whether there is enough growth of the right kind of timber to meet our current needs and, at the same time, provide the timber capital we will need in the years to come.

industry and public forests fairly high in productivity . . .

In the forests managed by forest industries and local, State, and Federal Governments (40 percent of the total acreage), the productivity of cutover land is relatively good. On 75 percent or more of the recently cutover area in these ownerships conditions are fairly close to what you will find on the better managed forests today. *Significance:* This finding is based on factors such as present and prospective numbers of trees and species. The fact that so much of the cutover lands in these ownerships is being kept productive—that, in addition, some cutover lands in farm and other ownerships are also being left in productive condition—are favorable signs; an indication of what can be done.

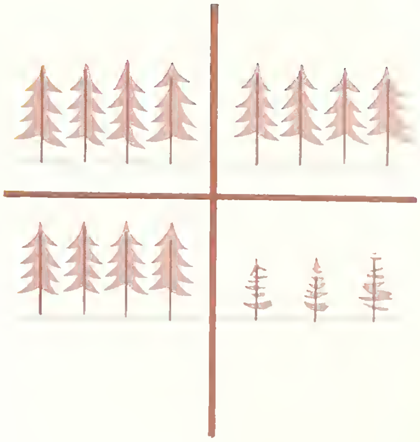
progress in control of forest fires . . .

Another favorable feature of the current forest situation is an evident downward trend in the area of land burned by forest fires—a trend attributable to steady progress in fire prevention and control. *Significance:* Today 88 percent of our acres are protected from forest fires. Two-thirds is protected well enough to meet average hazards. However, only 15 percent is protected well enough to keep the forest safe when the hazard is extreme (this is when our worst losses occur).



Though the record of the past quarter century bears evidence of the effectiveness of forest fire prevention and control, we cannot relax our vigilance. Fire still is, and will always be, a serious menace.

too few trees on too many acres . . .



Today 1 out of every 4 acres of America's forest is poorly stocked with trees, or not stocked at all. *Significance:* Obviously, we are not making effective use of our forest land when 115 million acres are not growing anywhere near the amount of timber they can. Most understocking is in the East, particularly in the Lake States and in the Southeastern States.

Understocking is also the main reason why recently cut lands fail to measure up to high productivity standards. While some of these lands can be expected to restore themselves eventually, many of them—because the seed trees are gone—will not restock naturally.

small private forests low in productivity . . .

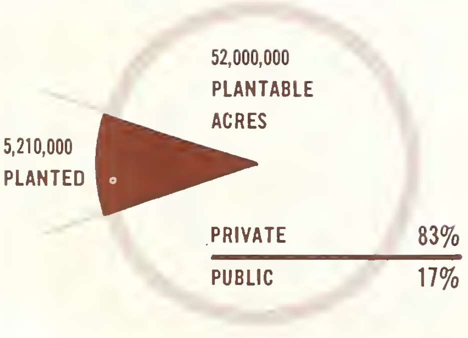
In most farm and other small private forests the productivity of cutover land is relatively low. In fact, less than half of these recently cutover lands approach reasonably good conditions for timber production. *Significance:* These small forests, representing 60 percent of our timberlands, are called upon to provide a substantial portion of the raw materials America's forest industries need.

There are some well-managed woodlands in every part of the country; the poorest cutover conditions are in the South.

more tree planting needed . . .

About 50 million acres, an area equivalent to 10 percent of all of our Nation's timberlands, need planting to become productive within a reasonable time. Planting on additional millions of acres would also help to improve stocking and to get lands back into productivity more quickly following cutting. *Significance:* Cutover lands can be restored to forests by nature through seed from trees left standing, or by man through the planting of seedlings from forest nurseries.

On large burned-over areas or other deforested lands, planting is often the only means of restocking.



In recent years much progress has been made in planting trees. Today there are successful forest plantations on more than 5 million acres.

However, there is a big job ahead, mainly on private lands in the East. Reforestation of all lands in need of planting could add about 8 billion board-feet each year to timber growth—a real contribution to our Nation's needs.

forest enemies take heavy toll . . .

Insects, disease, fire, and other forest enemies are now killing about 13 billion board-feet of sawtimber a year. *Significance:* This timber equals more than one-fourth of our annual net growth. Loggers salvage about 3 billion board-feet of it, the rest is lost.

In addition, these forest enemies weaken big trees, destroy little trees, delay restocking, and cause other serious losses in growth—in the long run these losses are many times greater than the immediate toll.

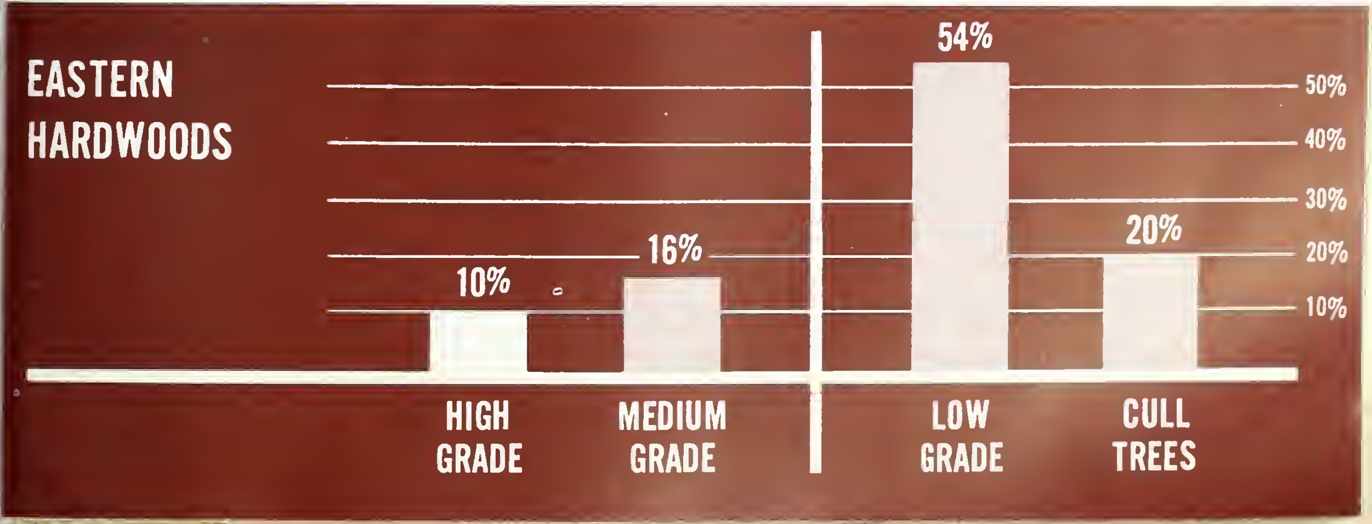
Today insects rank as the principal forest destroyers. In sawtimber, they kill several times as much timber as fire. In terms of long-range growth, however, disease is the most destructive agent of all.

too many poor trees . . .

One-tenth of America's standing timber is made up of trees that are rotten or crooked (cull trees). Moreover, a great deal of the hardwood sawtimber is inferior in quality. *Significance:* Cull trees take up valuable growing space; small size, knottiness and other defects limit the usefulness of the abundant second-growth hardwoods.

In the East, timber quality is poorer than in the West; most of the timber (softwoods as well as hardwoods) is small. Since tree size reflects quality, added growth on these may mean better quality in the future. Right now, however, timber quality nationwide appears to be declining.

1/4 of SAWTIMBER LOST

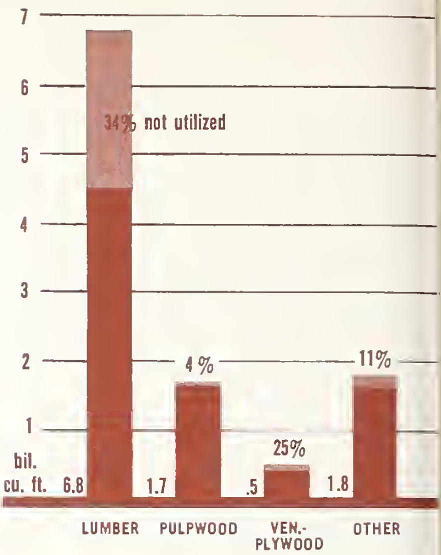


too much of timber cut not used . . .

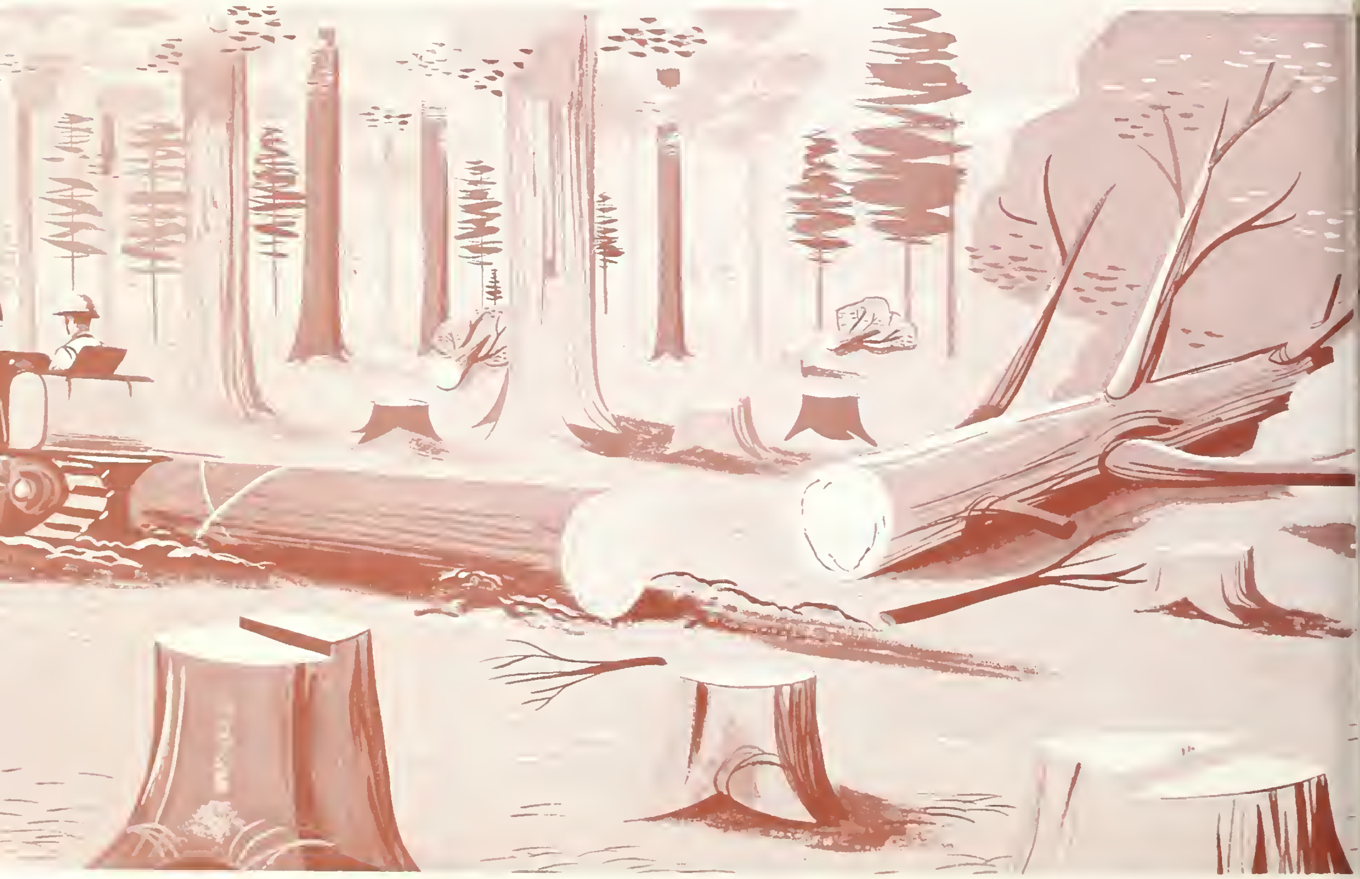
About one-fourth of the timber cut each year is not used for any purpose. *Significance:* Of the timber cut for lumber, about 34 percent is not utilized, either for fuel or for any other purpose. On the other hand, only 4 percent of the timber cut for pulpwood is not used.

Some residues, of course, are inevitable in logging and in wood manufacturing. Although great strides have been made in efficient use of the timber that is cut, too much is still being left in the woods and unused in the mill.

1/4 OF TIMBER CUT IS NOT UTILIZE



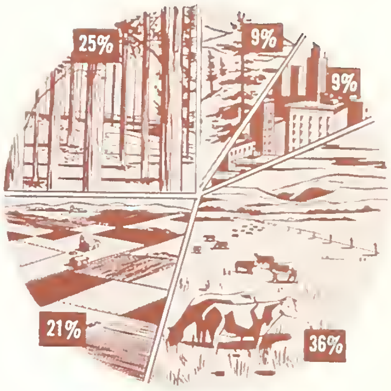
By finding additional uses for residues—particularly in timber cut for lumber—it should be possible to make available timber supplies go farther.



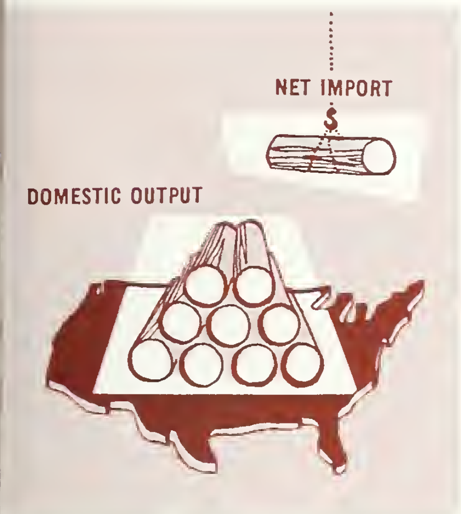
do we have enough forest land???

As our country has developed, forests have gradually given way to expanding agriculture and industry, to new highways, and to cities reaching out farther and farther into their surrounding regions. The longtime trend in our forest acreage has been downward—a trend which, with our growing population, will probably continue.

Today, one-fourth of our Nation's land is timberland. There is enough timber-growing acreage to meet present needs; whether there will be enough to accommodate all our future needs is a question.



other sources of timber are limited



In addition to 489 million acres of timberlands, America also has 176 million acres of other forest land, mostly in public ownership. More than 90 percent of this land is too poor to grow sawtimber trees. However, it is valuable for watersheds, grazing, recreation, and wildlife—often as valuable or more so than nearby timberlands. The rest of it has been set aside mainly for public recreational use.

The interior of Alaska has about 180 billion board-feet of sawtimber (about three-fifths as much as there is in the State of Washington). Although largely inaccessible at present, some of this timber ultimately may provide a limited addition to our supply.

Compared to other nations, the United States is fairly well endowed with timber. Although only about 10 percent of the timber we use comes from other countries, we are nevertheless the world's leading importer of timber products. Our chief dependence is upon Canada, especially for softwoods. Other Free World countries have little softwood timber to spare. In the future, even though we get more from Canada, our main reliance will still be on our own timber resources.

prologue to the future . .

progress . . .

Forestry in the United States has come of age. Progress in the last decade has been outstanding—proof of what *can* be done. These are some of the signs—

- Timber growth is increasing and softwood growth in the East now exceeds cut.
- Productivity is relatively good on forest industry lands and in the public forests.

- Steady gains are being made in forest fire prevention and control.
- After a long time decline, wood is now holding its own as an industrial material in the market place, with consumption at an alltime high.

opportunity . . .

America's forest situation offers great possibilities for increasing timber supplies to keep pace with the Nation's growth. Here are some of the best possibilities—

- Tree stocking can be improved.
- Control of insects and disease can be intensified.
- Tree planting and forest improvement measures, for increased volume and better timber quality, can be speeded up.

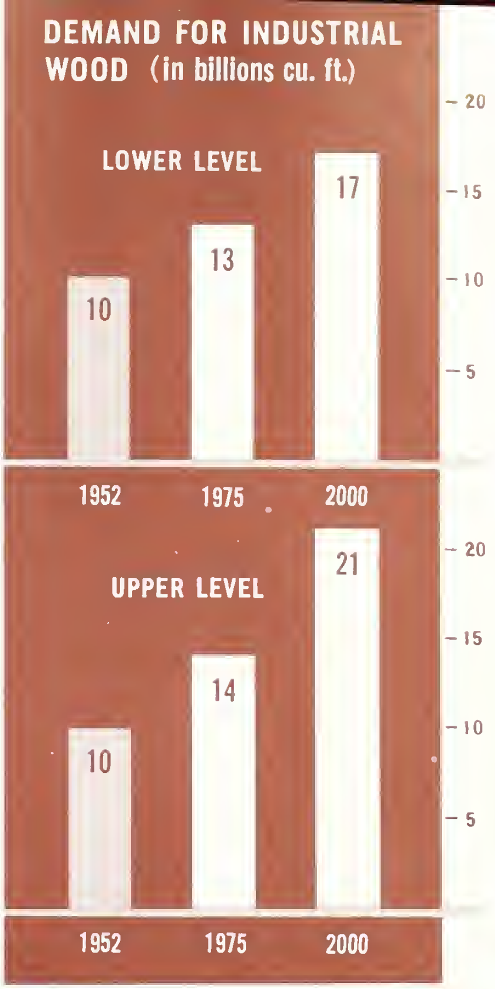
- With closer utilization of the trees we cut, timber supplies can be stretched materially.
- The real key to our future timber supply lies in the hands of those "1 out of every 10 American families" who own our small forests—these lands can be made more productive.

timber products for tomorrow . . .

It is reasonable to expect that wood will continue to play an important part in the life of every American. With population increasing rapidly it is obvious that more timber products (except fuelwood) will be used in 1975 and in 2000 than today. The question is: How much more?

If the price of industrial wood rises faster than the price of competing materials, probably less wood per person will be used. Even so, with the expected increase in population and improved standard of living the total demand for wood in 1975 is likely to be 25 percent greater than it is today; in 2000, 67 percent greater.

On the other hand, if industrial wood maintains its present relative place in the economy (and the price rises no faster than the price of competing materials) the total demand for wood in 1975 is likely to be 40 percent greater than it is today; in 2000, twice as great. This estimate, or projection into the future, is also based on the expected increase in population and improved living standards.



the trees that count . . .

In considering timber products for future use, what species or kinds of trees are most important?

Through the years, our principal dependence has been upon the pines, firs, and other softwoods, and upon the better hardwoods such as the high-quality oaks. Every year two or three times more softwood timber than hardwood is cut.

In the future America's dependence will still be upon the trees we find most useful today.

PEOPLE AND TIMBER . . .
AND THE FUTURE

All of the findings of the Timber Resource Review underline the contrast between the timber we have today and the timber we may need tomorrow.

To balance cutting in 2000, it will be necessary to raise the annual timber growth from today's 47 billion board-feet to between 80 and 100 billion board-feet, or even more.

To do this, and to meet our rising demands each year until 2000, means that we need to practice a lot more forestry on a lot more acres than we are doing right now — a lot more than most of us have ever thought about.

Time is important in our lives . . . and in the lives of trees. Where America stands 45 years from now depends on what we do in the years just ahead. Our land has the potential —

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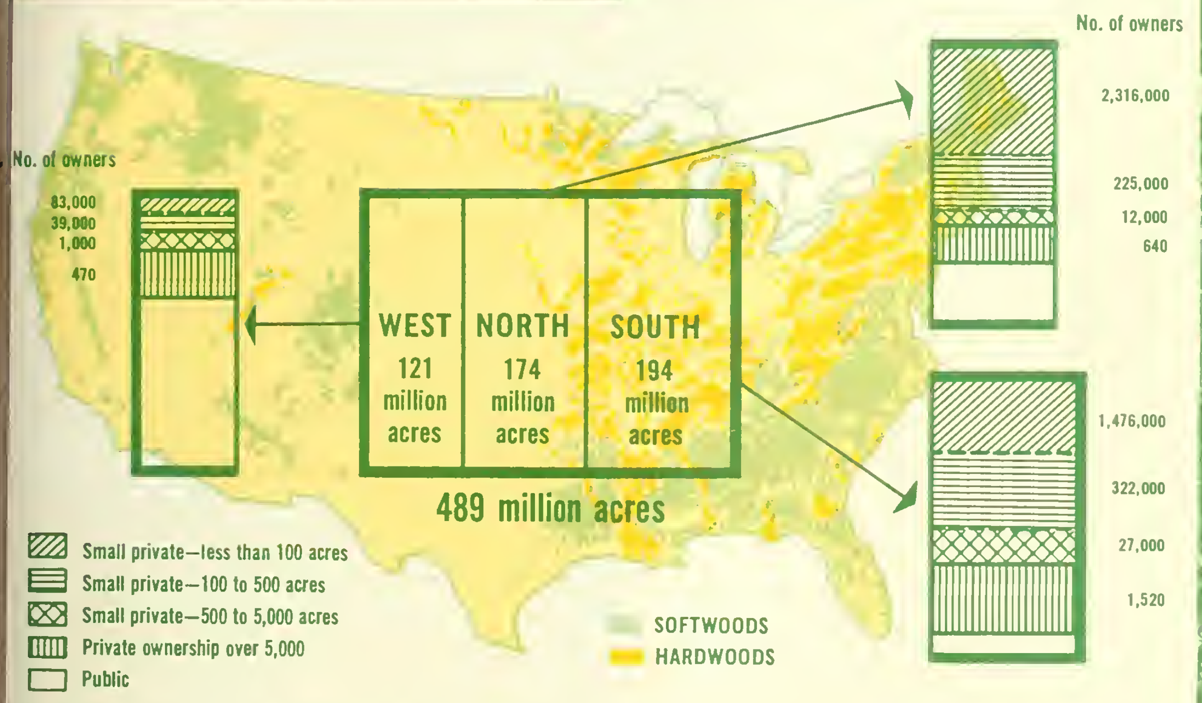
If we put every acre under good forest management we can have the timber we need

For —

TIMBER IS RENEWABLE

ERICA'S SOFTWOOD AND HARDWOOD FORESTS — THEIR OWNERSHIP AND DISTRIBUTION



"The real key to our future timber supply lies in the hands of those *one out of every ten American families* who own our small forests . . ."

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